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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/651,779	08/30/2000	Scott E Moore	108298515US	2448

7590

05/10/2002

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EXAMINER

NGUYEN, DUNG V

ART UNIT

PAPER NUMBER

3723

DATE MAILED: 05/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/651,779

Applicant(s)

SCOTT E. MOORE

Examiner

Dung V Nguyen

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 March 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-81 is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☒ Claim(s) 37,38,43-48 and 76-81 is/are allowed.
- 6) ☒ Claim(s) 1,2,5,13,14,16-18,23,26,29-31,39-42,49,50,61-63,66,67,74 and 75 is/are rejected.
- 7) ☒ Claim(s) 3,6-9,22,24,25,32,52,53,55,56,68 and 69 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Continuation of Disposition of Claims: Claims withdrawn from consideration are 4,10-12,15,19-21,27,28,33-36,51,54,57-60,64,65 and 70-73

DETAILED ACTION

Election/Restrictions

Claims 4, 10-12, 15, 19-21, 27, 28, 33-36, 51, 54, 57-60, 64, 65 and 70-73 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 4.

Specification

The disclosure is objected to because of the following informalities: typo errors, page 10, line 27, "electrodes 770a and 770b" should be "720a and 720b", line 29, "electrode pair 370a" should be "electrode pair 770a". Appropriate correction is required.

The attempt to incorporate subject matter into this application by reference to a publication entitles "Electroetching of Platinum in the Titanium-Platinum-Gold Metallization on Silicon Integrated Circuits" is improper because a publication date and/or a copy of the reference has not been furnished.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 18 does not comply with the requirements of 35 U.S.C. 112, second paragraph because a trademark or trade name is used in a claim as a limitation to identify a particular material. The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. The value of a trademark would be lost to the extent that it became descriptive of a product, rather than used as an identification of a source or origin on a product. Thus, the use of a trademark or trade name in a claim to identify or describe a material or product would not only render a claim indefinite, but would also constitute an improper use of the trademark or trade name.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2, 5, 13, 14, 16, 23, 26, 29, 31, 39-42, 49, 50, 61-63, 66, 67, 74 and 75 are rejected under 35 U.S.C. 102(e) as being anticipated by Easter et al (USPN

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6,368,190). Easter et al disclose a method for removing an electrically conductive material from a microelectronic substrate comprising positioning a first conductive electrode proximate to the microelectronic substrate, positioning a second conductive electrode 56 proximate the microelectronic substrate and spaced apart from the first conductive electrode, removing the conductive material from the microelectronic substrate by passing a varying current 50 through the first and second electrodes 56 without contacting the first and second electrodes 56 directly with conductive material of the microelectronic substrate, engaging the microelectronic substrate with a planarizing medium 42 while the microelectronic substrate is positioned proximate to the electrodes, moving at least one of the microelectronic substrate and the planarizing medium 42 relative to the other to remove material from the microelectronic substrate by a chemical and/or chemical-mechanical process, disposing a dielectric layer 60 between the microelectronic substrate and the first electrode, selecting the electrically conductive material to includes tungsten, tantalum, gold and/or copper. Eater et al also disclose an apparatus for removing conductive material from a microelectronic substrate comprising a support member 30 having at least one engaging surface to support the microelectronic substrate, a first electrode spaced apart from the support member 30 and from the microelectronic substrate when the microelectronic substrate is supported by the support member 30, a second electrode 56 spaced apart from the support member 30 and from the microelectronic substrate when the microelectronic substrate is supported by the support member 30, the second electrode 56 being spaced apart from the first electrode, at least one of the first and second electrodes 56 being

coupleable to a source of varying current 50, a planarizing medium 42 positioned proximate to the support member 30 to engage the support member when the support member engages the microelectronic substrate, a liquid electrolyte adjacent to the first electrode, a conduit 46 coupleable to a source of electrolyte, the conduit 46 having an outlet aperture proximate to the first and second electrodes, wherein the first and second electrodes define an electrode pair and the support member 30 is movable relative to the other while the at least one of the first and second electrodes is coupled to the source of varying current 50 (note abstract, Fig. 1, 2, col. 3, line 46 to col. 4, line 31, col. 5, lines 35-55).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 17, 18 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Easter et al. Easter et al disclose the claimed invention as described above, however, Easter et al do not disclose an electrolyte includes hydrochloric acid, the dielectric material includes Teflon, the first electrode includes a carbonaceous material. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include hydrochloric acid in the electrolyte, Teflon in the dielectric material and carbonaceous material in the first electrode, since it has been held to be within the general skill of a worker in the art to select a known material on the

basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Allowable Subject Matter

Claims 37, 38, 43-48 and 76-81 are allowed.

Claims 3, 6-9, 22, 24, 25, 32, 52, 53, 55, 56, 68 and 69 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: prior art of record fails to disclose or imply a method for removing an electrically conductive material from a microelectronic substrate comprising moving at least one of the microelectronic substrate and an electrode pair relative to other to align a second portion of the microelectronic substrate with the electrode pair and removing the conductive material from the second portion of microelectronic substrate or an apparatus for removing an electrically conductive material from a microelectronic substrate comprising a second electrode pair including third and fourth conductive electrodes spaced apart from a first electrode pair and being at least proximate to the microelectronic substrate when the microelectronic substrate is supported by a support member, as specifically recited by applicant's respective claims.

Conclusion

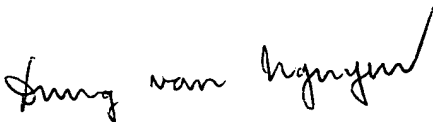
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Katsumoto et al, Glass and Uzoh are cited to show method and apparatus for removing conductive material from a microelectronic substrate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung V Nguyen whose telephone number is 703-305-0036. The examiner can normally be reached on M-F, 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J Hail can be reached on 703-308-2687. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9320 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

DVN
May 7, 2002

A handwritten signature in cursive script, reading "Dung van Nguyen".

Dung Van Nguyen
Patent Examiner

Attachment for PTO-948 (Rev. 03/01, or earlier)
6/18/01

The below text replaces the pre-printed text under the heading, "Information on How to Effect Drawing Changes," on the back of the PTO-948 (Rev. 03/01, or earlier) form.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

1. Correction of Informalities -- 37 CFR 1.85

New corrected drawings must be filed with the changes incorporated therein. Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and centered within the top margin. If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the Notice of Allowability. Extensions of time may **NOT** be obtained under the provisions of 37 CFR 1.136(a) or (b) for filing the corrected drawings after the mailing of a Notice of Allowability. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. Corrections other than Informalities Noted by Draftsperson on form PTO-948.

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by the examiner before the application will be allowed. No changes will be permitted to be made other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit the drawing corrections within the time period set in the attached Office communication. See 37 CFR 1.85(a).

Failure to take corrective action within the set period will result in **ABANDONMENT** of the application.